



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,280	05/25/2001	Hajime Kimura	740756-2317	1263
22204	7590	03/16/2006	EXAMINER YE, LIN	
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			ART UNIT 2615	PAPER NUMBER

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/864,280	Applicant(s) KIMURA, HAJIME	
	Examiner Lin Ye	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-18,21-36,38-46,48-56,58-66,68-76,78-81,83-86 and 88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-18,21-36,38-46,48-56,58-66,68-76,78-81,83-86 and 88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/31/2006 has been entered.
2. Applicant's arguments with respect to claims 3-18, 21-36, 38-46, 48-56, 58-66, 68-76, 78-81, 83-86 and 88 filed on 01/31/2006 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections – 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-18, 21-36, 48-56, 68-76, 78-81, 83-86 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. U.S. Patent 6,665,010 in view of Colley et al. U.S. Patent 6,230,975.

Referring to claim 3, the Morris reference discloses in Figures 5 and 8, a driving method of a MOS sensor (imager 140 is amplification type MOS sensor as shown in Figure 8) comprising a plurality of pixels (pixels 120, see Col. 5, lines 17-30) in an image pick up unit, each of said pixels comprising: a reset transistor (192, see Col. 6, lines 44-46); a photoelectric conversion element (diode 190) having a first terminal connected to one of source or drain terminals of said reset transistor (192), and a second terminal connected to a photoelectric conversion element (190) side power source line; a reset signal line (RESET) connected to a gate terminal of said reset transistor (192); a signal amplifier circuit (amplifying transistor 184, see Col. 6, lines 65-67) having an input terminal connected to said one of the source or drain terminals of said reset transistor (192); and a reset side power source line connected to other one of the source (VDD) or drain terminals of said reset transistor as shown in Figure 8, said method comprising the steps of: imaging a first object on trail (a premetering mode for determining the optimum integration interval, see Col. 3, lines 52-67 and Col. 4, lines 9-36), comprising the steps of: resetting said plurality of pixels at a same time (e.g., globally initialized by a predetermined initialization voltage, see Col. 6, lines 38-55); and sequentially selecting at least a part of said plurality of pixels (groups 113 including a plurality of pixels) to output signals (V_{out} , when $V_{intensity} \geq V_{thersh}$) of the selected pixels (See Col. 4, lines 10-21); determining a storage period (e.g., the "storage period" is considered as integration interval T_{INT} , charge accumulation time or exposure time

period) in accordance with a period from the time of said resetting (time of the initialization) to a time when the signal of the selected pixels saturate (the signal level reach a predetermined threshold, See Col. 4, lines 49-65); and imaging a second object ordinarily in normal mode (e.g. See Col. 5, lines 11-16, and Col. 7, lines 9-31). However, the Morris does not explicitly has a detail steps of imaging a second object ordinarily in normal mode, such as resetting said plurality of pixels sequentially; and selecting said plurality of pixels sequentially after said storage period has passed since resetting said plurality of pixels.

The Colley reference teaches in Figure1, 11 and 15, a driving method (e.g., in Figure 11) of a MOS sensor (102) comprising: imaging a object comprising the steps of: resetting said plurality of pixels sequentially; and selecting said plurality of pixels sequentially after said storage period has passed since resetting said plurality of pixels (See Col. 9, lines 5-19). The Colley reference is evidence that one of ordinary skill in the art at the time to see more advantages the image sensor can resetting said plurality of pixels sequentially and selecting said plurality of pixels sequentially after said storage period has passed since resetting said plurality of pixels so that providing a continuous and uninterrupted stream of pixel data in a series of repeating frames (See Col. 18, lines 47-58). For that reason, it would have been obvious to one of ordinary skill in the art at the time to modify the image sensor of Morris ('010) for providing the method of imaging a object ordinarily, comprising steps of: resetting said plurality of pixels sequentially; and selecting said plurality of pixels sequentially after said storage period has passed since resetting said plurality of pixels as taught by Colley ('975).

Referring to claim 4, the Morris and Colley references disclose all subject matter as discussed in respected claim 3, and the Morris discloses wherein said one of the signals has a largest signal amplitude (maximum possible intensity energy as shown in histogram Figure 6, see Col. 1, lines 59-67) among the signals of the selected pixels.

Referring to claim 5, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 3.

Referring to claim 6, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 4.

Referring to claim 7, the Morris and Colley references disclose all subject matter as discussed in respected claim 3, and the Morris reference discloses in Figures 5-11, a digital imager has a premetering mode (See Col. 3, lines 63); and sets a storage period (integration time T_{INT}) based on irradiating the imager with light having a highest intensity among lights (e.g., when ninety percent of the maximum possible energy has been received by the group 113, See Col. 4, lines 37-45).

Referring to claim 8, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 9, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 10, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 11, the Morris and Colley references disclose all subject matter as discussed in respected to claim 3, and the Morris reference discloses wherein the signals are

Art Unit: 2615

outputted exclusively from those of the plurality of pixels of said image pick up unit (118) that belong to a limited area (group 113).

Referring to claim 12, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 11.

Referring to claim 13, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 11.

Referring to claim 14, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 11.

Referring to claim 15, the Morris and Colley references disclose all subject matter as discussed in respected to claim 3, and the Morris reference discloses wherein the image of an object is picked up by using said storage period (integration interval, see Col. 7, lines 9-30).

Referring to claim 16, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 15.

Referring to claim 17, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 15.

Referring to claim 18, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 15.

Referring to claim 21, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 3.

Referring to claim 22, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 4.

Art Unit: 2615

Referring to claim 23, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 5.

Referring to claim 24, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 6.

Referring to claim 25, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 26, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 27, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 28, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 7.

Referring to claim 29, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 11.

Referring to claim 30, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 11.

Referring to claim 31, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 11 and 25.

Referring to claim 32, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 11 and 26.

Referring to claim 33, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 17.

Referring to claim 34, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 17.

Referring to claim 35, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 17 and 25.

Referring to claim 36, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 17 and 26.

Referring to claim 48, the Morris and Colley references disclose all subject matter as discussed in respected to claim 5, and the Morris discloses a mobile information terminal (digital camera 210, see Col. 7, lines 38-49) using the MOS sensor.

Referring to claim 49, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 48.

Referring to claim 50, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 48.

Referring to claim 51, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 48.

Referring to claim 52, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 10 and 50.

Referring to claim 53, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 48.

Referring to claim 54, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 48.

Referring to claim 55, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 50.

Referring to claim 56, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 48.

Referring to claim 68, the Morris and Colley references disclose all subject matter as discussed in respected to claims 3, and the Morris reference discloses the electronic apparatus is selected from digital still camera (210, see Col. 7, lines 38-49).

Referring to claim 69, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 4 and 68.

Referring to claim 70, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 5 and 68.

Referring to claim 71, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 6 and 68.

Referring to claim 72, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 10 and 68.

Referring to claim 73, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 12 and 68.

Referring to claim 74, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 13 and 68.

Referring to claim 75, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 14 and 68.

Referring to claim 76, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claims 15 and 68.

Referring to claim 78, the Morris and Colley references disclose all subject matter as discussed in respected to claim 3, and the Morris reference discloses wherein the first object is second object (e.g., the premetering mode for determining the optimal exposure time and the normal mode using the determined optimal exposure time from the premetering mode to image the object. This means that the object for imaging in the both modes should be same with same lighting conditions).

Referring to claim 79, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 78.

Referring to claim 80, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 78.

Referring to claim 81, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 78.

Referring to claim 83, the Morris and Colley references disclose all subject matter as discussed in respected to claim 21, and the Morris reference discloses wherein the plurality of first pixels are the plurality of second pixels (same imager used in both premetering mode and normal mode).

Referring to claim 84, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 83.

Referring to claim 85, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 83.

Art Unit: 2615

Referring to claim 86, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 83.

Referring to claim 88, the Morris and Colley references disclose all subject matter as discussed in respected same comments to claim 3.

5. Claims 38-46 and 58-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. U.S. Patent 6,665,010 in view of Colley et al. U.S. Patent 6,230,975 and Kamiko U.S. Patent 5,991,467.

Referring to claims 38-46 and 58-66, the Morris and Colley references disclose all subject matter as discussed in respected claims 3-6 and 10, except that the Morris reference does not explicitly states a fingerprint scanner using the MOS sensor.

The Kamiko reference discloses in Figures 15-18, an inexpensive, miniaturized fingerprint scanner (22, see Col. 13, lines 13-15) using a two-dimensional MOS image sensor (See Col. 12, lines 8-24). The Kamiko reference is evidence that one of ordinary skill in the art at the time to see more advantages the image MOS sensor is used into the fingerprint scanner so that scanner can be more compact and portable than the regular CCD fingerprint scanner. For that reason, it would have been obvious that one of ordinary skill in the art at the time to see the MOS sensor is used into the fingerprint scanner disclosed by Morris.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lin Ye
Examiner
Art Unit 2615

March 10, 2006